



# HYPER-AUTOMATING PROOF OF INCOME

CREDIT ASSESSMENT FOR  
RETAIL LOANS

DOCUMENT CLASSIFICATION AND  
EXTRACTION

OMNITIVE MIDP CASE STUDY

### Executive Summary

---

#### CHALLENGE

Automating proof of income evaluation to support the issuance of consumer loans in Spain requires manually classifying and extracting data from dossiers, containing various types of legal, tax and accounting documents. Annually, 75 million consumer loans applications, ranging from a few to thousand of Euros are evaluated. Each dossier on average contains 7 documents. On aggregate, 525 million documents are manually classified and some 4.2 bill. datapoints extracted. Currently, such operation involves 28,857 FTES providing specialized technical legal knowledge, following a maker-checker dynamic, and costing the industry an estimated €226 Mill. The status quo is expensive and slow, limiting evaluation speed, as well as the the ability to expand revenue and grow profit margins.

#### SOLUTION

We deployed Omnitive MIDP to classify documents, read and extract datapoints from consumer loan applications – including payroll, invoices, DNI / INE, bank statements, tax, etc. –, among others.

#### RESULTS

Our solution reduced the time required to process consumer loan applications by 93.33%, effectively from 15 to 1 minute. It features 99% classification accuracy and 98% data extraction accuracy. Proof of Income evaluation cost was reduced by 66,8% equivalent to 3 times. Lenders saw a boost in their capacity and processing speed, enabling them to achieve faster turn arounds and better customer service, leading to revenue and profitability growth.

### The Client

---

#### COMMITTED TO EVALUATING CONSUMER LOAN FASTER & BETTER

Customer is a leading Fintech with significant presence in the Spanish market through a well recognized brand and market offering. It works across the various customer segments, with strong focus on retail lending, and particularly consumer loans, for which proof of income is a must.

Currently, customer evaluates 840,000 consumer loans applications yearly, totaling €102 mill in awarded loan value.

Customer is an aggressive international fast mover, with a track record of success, ambitious growth plans, and an aim to offer services that change the way individuals handle their financial affairs. Being one of the top alternative lending brands in Spain, that adds tens of thousands of new customers weekly, profiting from the latest technological advancements is paramount to their strategic goals.

#### THE NEXT STEP WAS TO EMBRACE HYPER-AUTOMATION

Customer had a clear goal to continue being a leading Fintech, offering novel services, particularly on the consumer lending space. They conceptualized this goal as continuously applying technology to improve customer service and experience. They were keen and ready to adopt best-in-class hyper-automation solutions.



Transforming the front



Transforming the back



Evolving IT architecture and systems



Onboarding new technologies



Becoming an agile AI-driven organization

## The Challenge

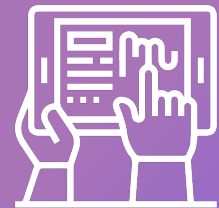
### HYPER-AUTOMATION BECOMING INDISPENSABLE FOR SUSTAINABLE GROWTH

Since foundation, developing technology to process vast amounts of data and applying A.I. to better serve customers was in customer's DNA. With a record of hyper-growing customers and ambitions to significantly increase the number and value of processed and granted consumer loans applications, customer's growth roadmap heavily relied on successfully adopting and deploying superior technology. A hyper-automation solution able to automate the evaluation proof of income to support consumer loan application was a must in their journey.

Consumer loans range from €200 to €75,000. Depending on the quantum, the evaluation process would require processing a varying number of documents, such as payroll, labor life, RPF, invoices, DNI / INE, etc. to establish residency, income capacity, and other key aspects. A single loan application could take anywhere from 5 to 30 minutes to review and evaluate.



€30 Bill consumer  
loan yearly value



Current process:  
€226 Mill  
&  
25 Mill hours



### HYPER-AUTOMATION CREATES KEY DIFFERENTIATION AND EFFICIENCIES

Customer was looking for an innovative digital solution that would help realize improved performance and efficiencies, while minimizing costs and errors. Specifically, that meant classifying 5.9 mill documents, extracting 3.9 Mill datapoints. Specialized human talent, commanding deep domain expertise including tax and financial knowledge, handled the process end to end, ensuring accuracy and compliance.

On aggregate, customer looked at 85,000 hours of labor, equivalent to almost € 1.5 Mill in cost.

There was no choice, customer had to exponentially improve operational efficiency and fully embrace hyper-automation.



75 Mill applications  
525 Mill documents  
4,200 Mill datapoints



## The Market Opportunity

### HYPER AUTOMATION DRIVING GROWTH



Yearly hours of labor:  
25 Mill.



Associated staff  
head count:  
12,555



FTE cost:  
€226 Mill

In 2022, industry players evaluated an estimated 75 Mill consumer loan applications, requesting anywhere from €200 to €75,000. Of those, ~50 Mill were successful totaling an aggregate value of €30 Bill. On average each application comprises 7 documents., requiring the labor of 1 FTE to manually complete the evaluation process.

At first documents need to be manually sorted, and depending on quantum, on average 56 datapoints manually extracted. The later are used to manually populate evaluation tools that would finally decide on the suitability of the application.

To manually evaluate 75. Mill. applications annually, 525 Mill. million documents need to be classified and some 4,201 Mill. datapoints extracted, across 1,875 Mill pages. These are not small numbers, and substantial manpower is employed to complete these tasks.

“HYPER-AUTOMATION TRANSFORMS HOW WE USE TECHNOLOGY MAKING ORGANIZATIONS SUCCEED”

Currently, the retail loan processing practice in Spain employees 12,555 staff across banks, financial institutions, retailers and FinTech’s.

Considering that a clerk, on average, can evaluate 498 applications monthly, and assuming a fully loaded FTE cost of €18k, the industry is spending around €226 Mill yearly on staff costs alone.

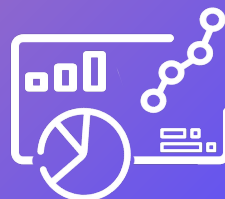
Customer was ready to fully embrace hyper-automation with very clear goals: support its aggressive growth, processing more consumer loans faster, boosting top lines, and increasing profitability. In a nutshell, continue growing exponentially.



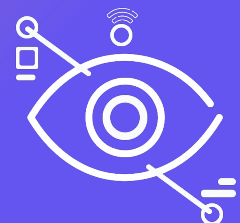
Yearly consumer  
loan value:  
EUR 30 Bill



Consumer loan  
dossiers:  
~75 million / year



Documents:  
525 million / year



Datapoints:  
4,201 million / year

## The Process

### A COLLABORATIVE PROCESS FROM START TO FINISH

The project begins with a collaboration to discover a detailed problem statement and opportunities for AI-driven hype-automation. The scope of the deployment is then carefully planned with contractually guaranteed outcomes. Various iterations of training using customers’ data corpus and algorithmic AI constructions are built into Omnitive MIDP. Once ready, the system is deployed to extract real and usable data, which is continually evaluated together with qualitative feedback to develop the best possible system.



Discovery



Scoping



Training



Development



Output



Evaluation



## The Solution

### 100% AUTOMATION OF CONSUMER LOAN EVALUATION

Customer had planned a sound workflow to automate 100% of the evaluation of consumer loans. Omnitive MIDP was the cornerstone of this project. Omnitive MIDP starts by cleansing, de-skewing and automating the classification of all documents in each consumer loan application. Next, MIDP completes the extraction of key datapoints ensuring correctness. Finally, the extracted data is stored and fed to the actual evaluation solution through APIs. At any time, areas of potential risk were highlighted and flagged to customer’s team to perform compliance checks. Once all these checks are in order, the application is ready to be evaluated according to customer’s specific metrics.

#### DOCUMENT TYPES

- Work life
- Payroll
- Tax Mod 100
- Invoices and proofs
- DNI / INE
- Bank statement
- Purchase invoice

#### KEY FEATURES



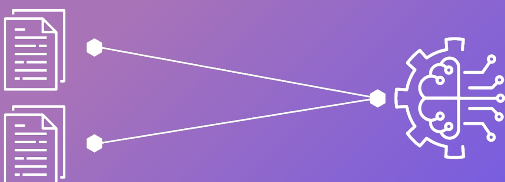
##### DOMAIN-SPECIALISED KNOWLEDGE

ORKID worked with the customer’s subject matter experts to nail domain-specific knowledge (i.e., legal, financial, and regulatory concepts) so that the system could interpret and comprehend complex linguistic structures in various formats consistently.



##### FLEXIBILITY IN LANGUAGES

ORKID was able to ensure that the system would handle complex cognitive tasks in a foreign language, Spanish, with unparalleled accuracy.



## THE INTELLIGENT BUILDING BLOCKS OF OMNITIVE MIDP

ORKID’s approach to document classification and data extraction brings in multiple intelligent tools for maximum accuracy and reliability, yet with a user-friendly focus. For customer, deployment was further conducted in stages. This gave the company greater control over the development process and allowed ORKID to perfectly tailor the solution to their requirements, down to the smallest detail.



### CONVERSION AND CLEANING

De-skewers and noise removers improve image quality. Optical Character Recognition (OCR) then converts free-form text characters into machine-encoded text.



### DOCUMENT CLASSIFICATION

Documents are sorted into pre-defined categories.



### INTELLIGENT EXTRACTION

MIDP understand and interprets text contextualizing like a human, only faster, extracting the required key pieces of information.



### VALIDATION

Extracted information is normalized and validated to ensure the highest levels of accuracy and compliance.



## The Results

### UNLOCKED SHORTCUTS IN PRODUCTIVITY AND INCREASED PROFITABILITY

Omnitive MIDP transformed the previously expensive manual process into a leading-edge automated solution. Total processing time for the evaluation of consumer loan applications was cut by 93.3%, to just 1 minute. Total operating costs were effectively reduced by 66.8%, or 3 times. These metrics were delivered alongside a 98.9% accuracy rate in classification and 97.6% in extraction. By customer request, and as it is customary in complex automations, the outcome produced was revised by a checker. Consequently, the customer’s ability to evaluate consumer loan applications was boosted, improving top lines, and increase profitability.



Overall classification and extraction accuracies of consumer loan portfolio documents were at an outstanding 98.9% and 97.6% respectively.

93.3%  
Reduction in  
processing  
time

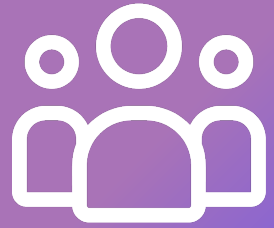
Accuracies:  
98.9% Classification  
97.6% Extraction

3X  
Total cost  
reduction

### HARNESSED THE INTELLIGENCE OF A HUMAN EXPERT IN LOAN DOCUMENT HANDLING

The automation of consumer loan applications posed a highly complex and stake bearing cognitive task. Omnitive MIDP was able to understand highly complex legal, financial, and regulatory concepts, automating the classification and extraction of documents.

The solution's accuracy marked a significant improvement from the prior slow and error-prone manual process. Consumer loan applications involved a many hours of specialized human labor and checks. The evaluation timeline often was not aligned with consumer expectations affecting revenues and customer experience.



€226 million staff cost spent annually on lawyers and paralegals to manually read, classify and extract information, and evaluate applications.



### MARKET PIONEER: 1<sup>st</sup> AUTOMATED PROOF OF INCOME EVALUATION SOLUTION

Working with ORKID, customer implemented a 100% digital consumer loan evaluation solution end to end. Omnitive MIDP cloud deployment, seamlessly integrated with customer's back-end workflow and core business model. Processing at lightning speed and impressive accuracy, customers could receive confirmation and feedback within hours, thereby elevating the customer experience. Able to evaluate more consumer loan applications faster, customer was able to reach perfect alignment with their long-term growth objectives and improve competitiveness.



### VALUE PROPOSITION: PUSHING THE LIMITS OF SCALABILITY

ORKID's Generative AI-powered hyper-automation solution pushed the boundaries of traditional automation in complex tasks requiring experience, skill, and training. It effectively integrated the necessary legal, financial, real estate and financial domain knowledge.



More importantly, the extreme accuracy generated stability and predictability in an otherwise fallible manual process. This intelligent solution helped advance innovation, delivering substantial savings in specialized staff work hours and overhead costs, while also enhancing productivity. It impressively reduced the time require to evaluate a consumer loan application to just 2 minutes, and the associated costs by 3 times, which helped improve the proccsing throughput, pushing top lines and profitability alike.

## What's Next

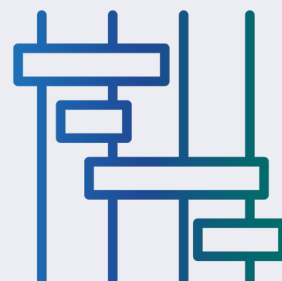
### CONTINUOUS ENHANCEMENT COMMITMENT

ORKID and customer continue to collaborate closely in a long-term partnership. The collaboration entails close analyses of performance metrics and continuous algorithmic refinements to achieve ever-improving results.

### NEW DIGITAL MILESTONES

ORKID and customer are planning to subsequently deploy projects in other parts of the business and geographic locations to leverage the full potential of hyper-automation.

Customer also has strong visions to digitally expedite its services further in new divisions and applications. Finally, both firms are committed to transforming the industry and are cooperatively selling the solution built to other industry players.







ORKID

unlock infinite

## ADDRESS

1 Scotts Road  
#21-08 Shaw Centre  
Singapore 228208

## WEBSITE

[www.orkid.io](http://www.orkid.io)

@ 2023 ORKID. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on best available resources. Opinions reflect judgement at the time and are subject to change. ORKID® and Omnitive™ are trademarks of ORKID®. All other trademarks are the property of their respective companies. For additional information visit <http://www.orkid.io>.